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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,816

01/26/2004

Xidong Wu

1033-NW1000

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84326 7590 08/11/2009
AT & T LEGAL DEPARTMENT - Toler
ATTN: PATENT DOCKETING
ROOM 2A-207
ONE AT & T WAY
BEDMINISTER, NJ 07921

EXAMINER

YUEN, KAN

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

08/11/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/764,816	Applicant(s) WU ET AL.	
	Examiner KAN YUEN	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,7-12,14-16,18,23,24 and 26-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7-12,14-16,18,23,24 and 27-34 is/are rejected.
- 7) ☒ Claim(s) 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after the Final Action. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/02/2009 has been entered.

Response to Arguments

1. Applicant's arguments with respect to claims 1, 2, 4, 5, 7-12, 14-16, 18, 23, 24, 26-34 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

re bilski

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 4, 5, 7-12, 14-16, 18, 26-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Though, the preamble of claims 1, 2, 4, 5, 7-12, 14-16, 18, 26-34 calls for a method but the body of the claims recites steps that could be performed mentally, verbally or without a machine

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nor is any transformation apparent. A statutory process under 35 U.S.C. 101 must (1) be tied to a particular machine, or (2) transform underlying subject matter (such as an article or material) to a different state or thing. See page 10 of In Re Bilski 88 USPQ2d 1385. The instant claims are neither positively tied to a particular machine that accomplishes the claimed method steps nor transform underlying subject matter, and therefore do not qualify as a statutory process.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Cioffi (Pub No.: 2005/0138524).

In claim 32, Cioffi disclosed the method of selectively applying a profile to a broadband link, the method comprising:

measuring, during a measurement period, a count of data transmission anomalies associated with data transmitted over a digital subscriber line having a first profile (Cioffi see paragraph 0066-0071, fig. 4). Code violations are measured on 0.017

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sec intervals in ADSL1. The code violation count is computed every 17ms, so the controller computes the fraction by which to multiply the code violation count in 15 minutes to compute the ratio of erroneous bytes to correct bytes received. So, if a line has 10,000 code violations in 15 minutes, the system would need $R/N=0.40$ (first profile), wherein the R, N or D (profiles) is the specification capability (see paragraphs 0017 and 0058);

comparing the measured count (MEV) to a profile switching threshold (TEV) and when the measured count exceeds the profile switching threshold, applying a second profile to the digital subscriber line (Cioffi see paragraph 0071-0079, fig. 4). If the error rate as represented by the MEV on this line is too high after comparison at step 440, then the CCR is reduced at step 460. If the MEV is sufficiently above the TEV, then K might be cut in half to $K'=94$, while holding $R=16$. K is the codeword composition parameter which is considered as the second profile.

Regarding claim 33, Cioffi disclosed the feature wherein the first profile has a first corresponding data packet throughput value and the second profile has a second corresponding data packet throughput value (Cioffi see paragraphs 0064-0069, 0107). The controller selects the appropriate profile that has the higher data rate, thus it is inherently to realize the profiles have different corresponding data rates.

Claim Rejections - 35 USC § 103

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524) in view of Ishikawa et al. (Pat No.: 5838671).

For claim 34, Coiffi did not explicitly disclose the feature wherein the profile switching threshold is determined based on an intersection of the first profile and the second profile. Ishikawa et al. from the same or similar fields of endeavor disclosed the feature wherein the profile switching threshold is determined based on an intersection of the first profile and the second profile (Ishikawa et al. see column 14, lines 44-55). The interference threshold can be set equal to a number indicated by an intersection between a horizontal line and vertical line. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught

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by Ishikawa in the network of Cioffi. The motivation for using the feature as taught by Ishikawa in the network of Cioffi being that it provides transmission accuracy.

8. Claims 1, 2, 4, 5, 29-31 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Cioffi (Pub No.: 2005/0138524).

For claim 1, Cioffi disclosed the method of selecting a profile of a digital subscriber line, the method comprising:

determining a number of code violations of the digital subscriber line by measuring a count of data transmission anomalies associated with data transmitted over the digital subscriber line during a measurement time period while the digital subscriber line is in operation (Cioffi see paragraph 0066-0071, fig. 4). Code violations are measured on 0.017 sec intervals in ADSL1. The code violation count is computed every 17ms, so the controller computes the fraction by which to multiply the code violation count in 15 minutes to compute the ratio of erroneous bytes to correct bytes received. So, if a line has 10,000 code violations in 15 minutes, the system would need $R/N=0.40$ (R and N can be the profiles), wherein the R, N or D (profiles) is the specification capability (see paragraphs 0017 and 0058). Further, fig. 6 illustrates a MEV acquire mean 642 for measuring MEV (see paragraph 0100). It is inherently to realize the measurement is performed when the ADSL is active (operative);

determining a first data packet throughput value of the digital subscriber line using a first profile based on the number of code violations; and

determining a second data packet throughput value of the digital subscriber line using a second profile based on the number of code violations (Cioffi see paragraphs 0064-0069). For example, if a line has 10,000 code violations, the system would need $R/N > 0.38$. Thus, $R=16$, $N=40$ would work. In exchange for eliminating the errors, the data rate (throughput) on this line would be reduced by 35.7% of the line's data rate when operated with 10,000 code violations. Even in this extreme case of 10,000 violations per quarter hour, approximately 2/3 of the throughput can still be achieved with no errors if the N and R (profiles) values are changed in the profile according to the embodiments. Thus the determination of the throughput is based on number of code violations; selecting, from the first profile and the second profile, a profile that has the higher data packet throughput value (Cioffi see paragraph 0107). Implementations include communication system equipment providing more profile options for different values of N. This allows a controller to select/recommend the appropriate profile that provides the highest data rate available with little or no errors within the remaining constraints of the communication system. Although Cioffi does not explicitly disclose the feature for determining the second throughput, but it is obvious to the person of ordinary skill in the art at the time of the invention to perform the second throughput measurement when the code violations increases or decreases. The motivation for using the obviousness being that it provides transmission reliability by adjusting the transmission rate when the code violation increases.

Regarding claim 2, Cioffi disclosed the feature for applying the selected profile to the digital subscriber line (Cioffi see paragraph 0107-0108).

Regarding claim 4, Cioffi disclosed the feature for determining a third estimated data packet throughput value associated with a third profile based on the number of code violations (Cioffi see paragraphs 0064-0069). Although Cioffi does not explicitly disclose the feature for determining the second throughput, but it is obvious to the person of ordinary skill in the art at the time of the invention to perform the second throughput measurement when the code violations increases or decreases. The motivation for using the obviousness being that it provides transmission accuracy;

Regarding claim 5, Cioffi disclosed the feature for determining a plurality of data packet throughput values associated with a plurality of profiles based on the number of code violations and wherein a first set of the plurality of profiles correspond to a first data line transmission speed and a second set of the plurality of profiles correspond to a second data line transmission speed (Cioffi see paragraphs 0064-0069). Once the number of code violations varied, the R and N profiles would be changed. Thus the throughput can also be increased or decreased on the number of code violations and the profiles.

Regarding claim 29, Cioffi disclosed the feature wherein a data transmission anomaly includes a bipolar violation (Cioffi see paragraph 0066-0071).

Regarding claim 30, Cioffi disclosed the feature wherein a data transmission anomaly includes an excessive zeros error event (Cioffi see paragraph 0066-0071).

Regarding claim 31, Cioffi disclosed the feature wherein a data transmission anomaly includes a frame synchronization bit error (Cioffi see paragraph 0066-0071).

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Sweitzer et al. (Pub No.: 2003/0189977).

For claim 7, Cioffi did not disclose the feature wherein the first data line transmission speed is 1536 kbits per second, the second data line transmission speed is 768 kbits per second, and the third data line transmission speed is 384 kbits per second. Sweitzer et al. from the same or similar fields of endeavor teaches the feature wherein the first data line transmission speed is 1536 kbits per second, the second data line transmission speed is 768 kbits per second, and the third data line transmission speed is 384 kbits per second (Sweitzer et al. see paragraph 0040, lines 10-15, and Table 1). Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Sweitzer et al. in the network of Cioffi. The motivation for using the feature as taught by Sweitzer et al. in the network of Cioffi, being that each receiving and transmission side displays a highest and lowest transmission rate.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Tzannes (Pat No.: 6498808).

For claim 8, Cioffi did not disclose the feature wherein at least one of the first set of the plurality of profiles is an interleaved profile and another of the first set of the plurality of profiles is a non-interleaved profile. Tzannes from the same or similar fields of endeavor teaches the feature wherein at least one of the first set of the plurality of profiles is an interleaved profile and another of the first set of the plurality of profiles is a non-interleaved profile (Tzannes see column 21, lines 1-15). As shown one path is interleaved and the other is non-interleaved. Therefore we can make it obvious that the interleaved path is for the interleaved profile or data, and the non-interleaved path is for the non-interleaved profile or data. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Tzannes in the network of Cioffi. The motivation for using the feature as taught by Tzannes in the network of Cioffi, being that it provides two sets of data. One set of data is transmitted in the non-interleaved path, and other in the interleaved path. The non-interleaved path provides low latency.

11. Claims 9, 10, 14, 23, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Ishiai (Pub No.: 2002/0021708).

For claim 9, Cioffi did not disclose the feature generating a graphical display that illustrates the first data packet throughput value, the second data packet throughput value, and the number of code violations. Ishiai from the same or similar fields of

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endeavor disclosed the feature for generating a graphical display that illustrates the first data packet throughput value, the second data packet throughput value, and the number of code violations (Ishiai fig. 7, paragraph 0073). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Ishiai in the network of Cioffi. The motivation for using the feature as taught by Ishiai in the network of Cioffi being that it provides user friendliness.

Regarding claim 10, Ishiai disclosed the feature wherein the graphical display illustrates a first set of data packet throughput points for the first profile and a second set of data packet throughput points for the second profile (Ishiai fig. 7, paragraph 0073).

Regarding claim 14, Ishiai disclosed the feature wherein the first set of data packet throughput points form a first display curve, the second set of data packet throughput points form a second display curve, and wherein the first display curve and the second display curve are displayed in a manner to allow selection of a profile having the highest data packet throughput for a selected number of code violations (Ishiai fig. 7, paragraph 0073). Although Ishiai did not explicitly manages the data in curve form, however it is obvious to manage data in any form such as in chart, curve, or pie form.

Regarding claim 23, Cioffi disclosed the digital subscriber line control system comprising:

a controller including memory (ROM 804 and RAM 806) and a processor (Cioffi see paragraph 0113, fig. 8). Fig. 8, illustrates a typical computer system that can be

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used by a user and/or controller in accordance with one or more embodiments of the present invention;

a code violation measurement unit responsive to a plurality of digital subscriber lines, the code violation measurement unit to provide code violation data associated with each of the digital subscriber lines by measuring a count of data transmission anomalies associated with data transmitted over each digital subscriber line during a measurement time period while each digital subscriber line is in operation (Cioffi see paragraph 0066-0071, fig. 4). Code violations are measured on 0.017 sec intervals in ADSL1. The code violation count is computed every 17ms, so the controller computes the fraction by which to multiply the code violation count in 15 minutes to compute the ratio of erroneous bytes to correct bytes received. So, if a line has 10,000 code violations in 15 minutes, the system would need $R/N=0.40$ (first profile), wherein the R, N or D (profiles) is the specification capability (see paragraphs 0017 and 0058). Further, fig. 6 illustrates a MEV acquire mean 642 for measuring MEV (see paragraph 0100). It is inherently to realize the measurement is perform when the ADSL is active (operative). Although the reference does not explicitly disclose the feature to measure a plurality of DSLs, but since Cioffi can measure a DSL, thus it is obvious to measure a plurality of DSLs. The motivation being that it provides transmission reliability; and

a profile database to store a plurality of profiles including a first profile and a second profile (Cioffi see paragraph 0114). For example, instruction for running a codeword composition controller may be stored on mass storage device 808 or 814, wherein the composition parameters maybe K, N and R (profiles). Although Cioffi did

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not explicitly disclose the profiles being installed in the mass storage device 808 or 814, but since the mass storage device 808 can be used to store data and instructions, thus it is obvious to store the profiles in the mass storage device 808. The motivation being it reduces processing time;

a graphical display (fig. 8, I/O Device 810, see paragraph 0114); and

wherein the controller selects a profile from the profile database that has the highest data packet throughput value at a particular measured number of code violations for at least one of the digital subscriber lines (see paragraph 0107).

Implementations include communication system equipment providing more profile options for different values of N. This allows a controller to select/recommend the appropriate profile that provides the highest data rate available with little or no errors within the remaining constraints of the communication system.

However, Cioffi did not explicitly disclose a terminal device responsive to the controller, the terminal device configured to display a graphical report the graphical report including a first profile curve illustrating data packet throughput values with respect to code violation data for the first profile and a second profile curve illustrating data packet throughput values with respect to code violation data for the second profile.

Ishiai from the same or similar fields of endeavor disclosed the terminal device responsive to the controller, the terminal device configured to display a graphical report the graphical report including a first profile curve illustrating data packet throughput values with respect to code violation data for the first profile and a second profile curve illustrating data packet throughput values with respect to code violation data for the

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second profile (Ishiai fig. 7, paragraphs 0073-0075). Although Ishiai did not explicitly manages the data in curve form, however it is obvious to manage data in any form such as in chart, curve, or pie form. The motivation for using the feature as taught by Ishiai in the network of Cioffi being that it provides user friendliness.

Regarding claim 24, Ishiai disclosed the feature wherein the first profile curve intersects the second profile curve (Ishiai fig. 7, paragraphs 0073-0075). Although Ishiai did not explicitly manages the data in curve form, however it is obvious to manage data in any form such as in chart, curve, or pie form.

12. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Cooper et al. (Pat No.: 6678245).

For claim 11, Cioffi did not disclose the feature wherein the numbers of code violations are measured during a selected time period. Cooper et al. from the same or similar fields of endeavor teaches the feature wherein the numbers of code violations are measured during a selected time period (Cooper et al. see column 4, lines 48-62). Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Cooper et al. in the network of Cioffi. The motivation for using the feature as taught by Cooper et al. in the network of Cioffi being that it provides service selection based on the time requested by users.

For claim 12, Cooper et al. also disclosed the method of the selected time period is less than thirty minutes (see column 4, lines 48-62).

13. Claims 16 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Lotter et al. (Pat No.: 7218645).

For claim 16, Cioffi did not disclose the feature wherein the data packet throughput is a TCP/IP throughput. Lotter et al. from the same or similar fields of endeavor teaches the method of the data packet throughput is a TCP/IP throughput (see column 12, lines 9-15). Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Lotter et al. in the network of Cioffi. The motivation for using the feature as taught by Lotter et al. in the network of Cioffi being that it provides guaranteed data with QoS since TCP/IP is a QoS transmission protocol.

Regarding claim 21, Lotter et al. disclosed the feature wherein the data packet throughput value is a TCP/IP throughput value (Lotter et al. see column 12, lines 9-15).

14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Aoki (Pub No.: 2003/0033262).

For claim 18, Cioffi did not disclose the feature of switching a profile from a previously applied profile to the selected profile on the digital subscriber line. Aoki from the same or similar fields of endeavor teaches the feature switching a profile from a previously applied profile to the selected profile on the digital subscriber line (Aoki see

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paragraph 0025, lines 1-10). As shown, the system includes switching equipment 11 to switch users between a lower speed and a higher speed connection environment. Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Aoki in the network of Cioffi. The motivation for using the feature as taught by Aoki in the network of Cioffi being that it provides switching system to switch a user to different level of speed transmission.

15. Claims 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Hardy (Pat No.: 5781598).

For claim 27, Cioffi did not explicitly disclose the feature wherein the count of data transmission anomalies occurs while data is transmitted over the digital subscriber line at a data rate of at least 384 kb/sec. Hardy from the same or similar fields of endeavor disclosed the feature wherein the count of data transmission anomalies occurs while data is transmitted over the digital subscriber line at a data rate of at least 384 kb/sec (Hardy see column 8, lines 32-40). After reaching the data flow rate threshold, the preset packet mode timer 27 starts counting down to zero. Although Hidaka et al. does not explicitly disclose the feature to set the threshold to 384 kb/sec, however the 384 kb/sec is only a matter of design choice. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the feature as taught by Hardy in the network of Cioffi. The motivation for using the feature being that it enhances the counting feature.

Claim 28 is rejected similar to claim 27.

16. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cioffi (Pub No.: 2005/0138524), in view of Ishiai (Pub No.: 2002/0021708) as applied to claim 14 above, and further in view of Castellano et al. (Pub No.: 2006/0114833).

For claim 15, Cioffi and Ishiai both did not explicitly disclose the feature wherein the selected number of code violations is correlated with a level of noise present on the digital subscriber line. Castellano et al. from the same or similar fields of endeavor disclosed the feature wherein the selected number of code violations is correlated with a level of noise present on the digital subscriber line (Castellano et al. see paragraph 0030). Thus, it would have been obvious to the person of ordinary skilled in the art at the time of the invention to use the feature as taught by Castellano et al. in the network of Cioffi and Ishiai. The motivation for using the feature being that it provides transmission accuracy.

Allowable Subject Matter

17. Claim 26 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Examiner's Note:

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kan Yuen/
Examiner, Art Unit 2416

/Ricky Ngo/
Supervisory Patent Examiner, Art
Unit 2416

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